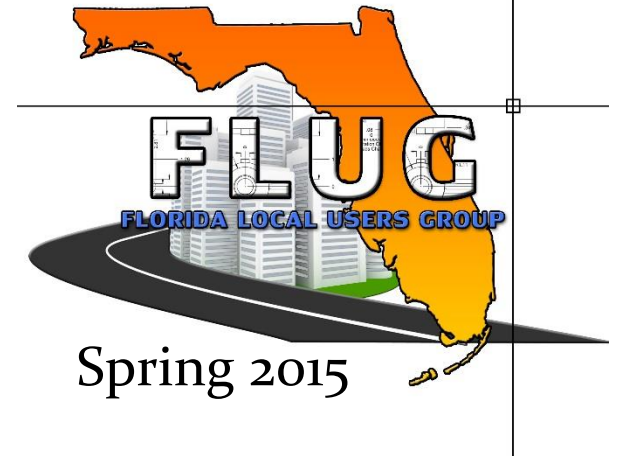
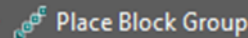
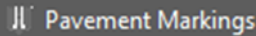


FDOT Traffic Plans Using Civil 3D 2015 MR1



Spring 2015

**FDOT Signs Application
Pavement Markings
Place Block Group**



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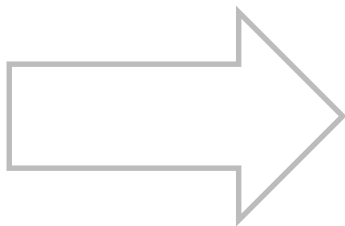
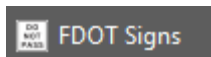
Webinar Videos

Webinars on this and other subjects are available at:

<http://www.dot.state.fl.us/ecso/downloads/GoToMeetingTraining/PostedWebinars.shtm>

FDOT Traffic Plans ₂						
	FDOT C3D 2015 Sign Tool	This webinar demonstrates using the FDOT Sign Tool located on the FDOT Ribbon to produce Signing & Pavement Marking Plans, will show Editing Techniques and Labeling.	70.4 MB	0:39:24	10/15/2014	Randy Roberts
	FDOT C3D 2015 Sign Tool					
	FDOT C3D 2015 Sign Tool Q & A					
	FDOT C3D Pavement Marking Tools	This webinar demonstrates using the FDOT Sign Tool located on the FDOT Ribbon to produce Signing & Pavement Marking Plans, will show Editing Techniques and Labeling.	103 MB	0:48:16	10/15/2013	Randy Roberts

FDOT Signs Application



FDOT Sign Assembly Tool 1.02.15

File Settings

Assembly: sign-006

Panel Properties Post Properties Assembly Location Labels

Panel Layout

Back Front

Preview Mirror

Total Area: 5.00

☐ Panel Only

Clear Panel Quick Save

Select Panel

☐ Use Custom Blocks

Application: Conventional

Panel Class: School(S)

Panel Name: S5-3

☐ Search All Panel Label Names

Panel Size: 24"x30"

State: Proposed

Panel Area: 0.00

☒ Main Panel

☐ Custom Size:

☐ Custom Area:

END SCHOOL SPEED LIMIT

Show/Update Block Preview

Panel Custom Label Fields

Field 1:

Field 2:

Field 3:

Field 4:

Field 5:

Field 6:

Block definition installed: S5-03

Do's and Don'ts

- You can't use Entity Manager to place sign posts due to pay items being assigned via the sign XML file, but you can use EMX to place post blocks if no pay item is required.
- You can use AutoCAD copy commands to copy and place the same post (it will maintain the same pay item information that it already has attached)
- You can explode the Guidsign sheet information since it is not dynamic data

What's New!

- You can now Mirror your front panel assemblies to auto-populate the back side if using the same panels
- You can label all sign panels under one command click now instead of clicking label panels for each instance
- You have options to group panels and/or labels together for easier editing
- Shapes have been introduced with the labels (Ovals and Rectangles)
- Panel Only check box to make it easier to make a Panel Only Assembly
- Easier operation to open previously saved assemblies, has a new preview option

Application Interface

Program Name &
Version

Main Menu

Sign Assembly
file setup and
editing

Properties for
panels, posts,
location, and
labeling specs. &
placement
details

Specifications,
block preview
& details

The screenshot shows the FDOT Sign Assembly Tool 1.02.15 application window. The title bar reads "FDOT Sign Assembly Tool 1.02.15". The menu bar includes "File" and "Settings". Below the menu bar is a toolbar with icons for opening, saving, and other functions. A dropdown menu labeled "Assembly:" is present. Below the toolbar is a tabbed interface with four tabs: "Panel Properties", "Post Properties", "Assembly Location", and "Labels". The "Panel Properties" tab is active. It contains a "Panel Layout" section with a grid of 16 squares (4x4) and a "Back Front" section with a grid of 16 squares (4x4). Below these is a "Preview" button and a "Mirror" button. The "Total Area:" section has a "Panel Only" checkbox. The "Set Panel" section has a "Quick Save" button and a "Select Panel" section with a "Use Custom Blocks" checkbox. Below this are dropdown menus for "Application:", "Panel Class:", and "Panel Name:". There is a "Search All Panel Label Names" checkbox and a search input field. Below these are dropdown menus for "Size:" and "State:", followed by an "ALL" button. The "Panel Area:" section has checkboxes for "Main Panel", "Custom Size:", and "Custom Area:", each followed by an input field. On the right side of the "Set Panel" section is a "Show/Update Block Preview" button and a "Panel Custom Label Fields" section with six input fields labeled "Field 1:" through "Field 6:".

Application Interface

Clear Panel- Used to clear panel properties. This button toggles with Set Panel.
Set Panel- Used to enable Panel properties

Panel Layout – Defines Panel(s) orientation, Front and /or Back

Search Button – Used to search for Panel Names

Preview – Displays a preview of all panels and lists combined panels area in the assembly as it will be drawn.

Assembly Name- A three digit number is added at the end of the name

Quick Save – Allows a save to the sign assembly before drawing insertion

Custom Blocks – Selected for use of custom made blocks such as those made in Guidsign

Block Preview – Shows Selected panel

Main Panel – Used to identify the main panel(s) Your first panel should be designated as Main

Panel Only Option to place a panel only sign

Custom Block Definitions – Size and area of custom made blocks such as those made in Guidsign

Custom Field Labels – Used for entering variable information like speeds route numbers



Application Interface

Auto-name Assembly- creates a auto-named assembly so user can create faster assemblies. You can still use the create new assembly button for creating a specific named assembly

All – used to force all used panels to change to the state chosen. If you open a previously saved assembly and you want to change it from proposed to Existing to Remain you would use this option

FDOT Sign Assembly Tool 1.02.15

File Settings

Assembly: [dropdown]

Panel Properties | Post Properties | Assembly Location | Labels

Panel Layout

Back Front

Preview Mirror

Total Area:

☐ Panel Only

Set Panel Quick Save

Select Panel

☐ Use Custom Blocks

Application: [dropdown]

Panel Class: [dropdown]

Panel Name: [dropdown]

☐ Search All Panel Label Names

[input field]

Size: [dropdown]

State: [dropdown] **ALL**

Panel Area:

☐ Main Panel

☐ Custom Size: [input field]

☐ Custom Area: [input field]

Show/Update Block Preview

Panel Custom Label Fields

Field 1: [input field]

Field 2: [input field]

Field 3: [input field]

Field 4: [input field]

Field 5: [input field]

Field 6: [input field]

Read-Only : This sign assembly has already been placed in the drawing!

Post Properties

Pay Item – Can be Auto-Selected based on Select Post properties of manually selected from list

Select Post – Define the properties needed to identify the proper pay item

Auto-Select Pay Item – Will select the appropriate pay item based on post properties

The screenshot shows a software window titled 'Post Properties' with a menu bar (File, Settings) and a toolbar. Below the toolbar is a tabbed interface with 'Panel Properties', 'Post Properties' (selected), 'Assembly Location', and 'Labels'. The 'Post Properties' tab contains the following elements:

- Pay Item:** A dropdown menu showing 'SINGLE POST SIGN [1 SIDED], FURNISH and INSTALL GROUND MOUNT, 12-20 SF | 071'.
- Select Post:** A section with several dropdown menus and their associated counts:
 - Installation: Ground Mount [8]
 - Mounting: Single or Multi-Post [4]
 - State: Proposed [5]
 - Sign Type: Furnish and Install Ground M [4]
 - Options: 1 Sided
- Total Area:** A text label showing '12.00'.
- Auto-Select Pay Item:** A button at the bottom of the 'Select Post' section.
- Post Block Preview:** A square graphic on the right showing a white circle on a dark background, representing the sign post.

Callout arrows from the text boxes on the left point to the 'Pay Item' dropdown, the 'Select Post' section, and the 'Auto-Select Pay Item' button. An arrow from the 'Post Block Preview' box points to the square graphic. An arrow from the 'Size and Total Area' box points to the 'Total Area' label.

Post Block Preview
Shows the block for the associated post

Size and Total Area – Shows total sign panel areas for Multi panel sign assemblies

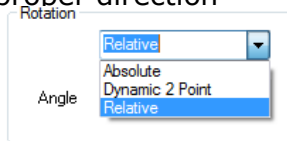
Assembly Location

Placing Objects (Entity)

–This is the recommended method because you can use this in conjunction with C3D Transparent Command Station/Offset

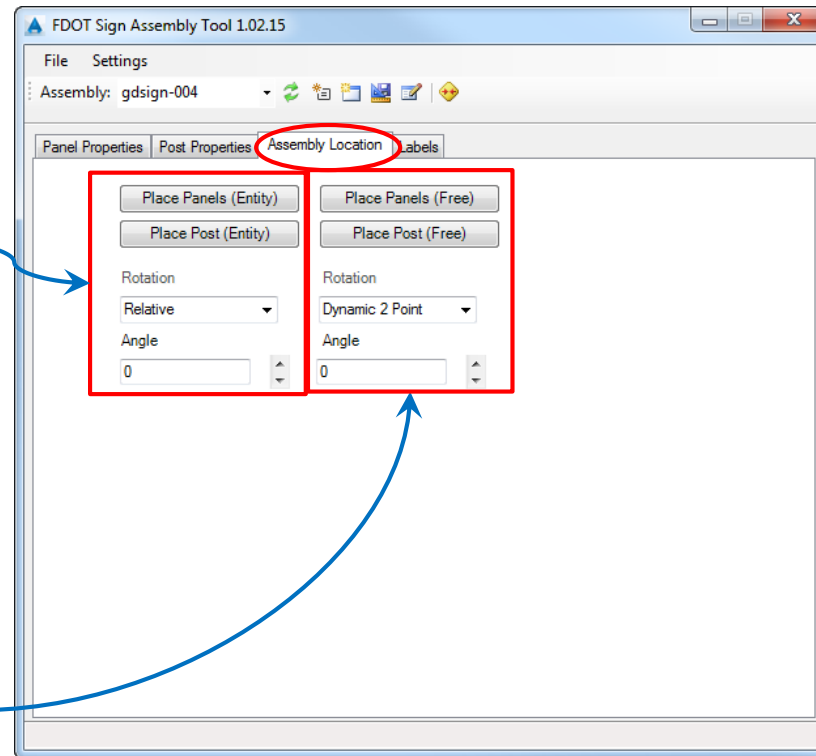


You also want to set the rotation to Relative so the panels and posts will rotate the proper direction



Placing Objects (Free) –

This option places panels and posts in the file not based on any alignment. To get the rotation correct you will have to use the Dynamic 2 point option, otherwise the rotation will be based on your north



Labels Tab

Label Settings –

When **Add Shapes** is active it will add rectangles and ovals to the labels.

Text Style should be set to FDOT as shown.

Group Label will put the labels in the same group as the panels it is recommended that you leave it un active because you will want to adjust the label locations

File Settings
Assembly: sign-005

Panel Properties Post Properties Assembly Location **Labels**

Label Settings

☒ Add Shapes Text Style: FDOT ☐ Group Label

Sign Panels Label

Place Panel Name ON
Place Panel Size ON
Use Block(s) OFF Name Block: panel_test_name
Size Block: panel_test_size
Spacing 0
Place Sign Panels Label ☐ Label PayItem (Panel Only)

Sign Post Label

Place PayItem ON
Place Station ON
Use Block(s) OFF PayItem Block: post_test_payitem
Station Block: post_test_station
Spacing .1
Place Sign Post Label

Sign Post Label –

Displays the current settings set that will be applied to labels placed. Click Place Sign Post Label and pick the post in the drawing then click where you want it placed.

Sign Panels Label –

Displays the current settings set that will be applied to labels placed. Click Place Sign Panel Label and pick the panel in the drawing then click where you want it placed. For multiple panels you can keep clicking on the panels to label them to exit the label command press enter. **Label Payitem (Panel Only)** When making a panel only assembly make this active otherwise leave it unchecked

User Preferences

Panel Label Preferences

FDOT Sign Assembly Tool - User Preferences

Sign Panel Label Preferences

☒ Name panel_test_name Select Block... ☐ Use Block(s)

☒ Size panel_test_size Select Block...

Layer: TextLabel

Spacing: 0

Block Library: C:\FDOT2015.C3D\APPS\FDOTSigns\panelblocks.dwg Browse...

Panel Label Prefs Post Label Prefs General Prefs

Ok Save Cancel

Options – When **Name** and **Size** are active the information will be included in the label. The **Layer** should be set to TextLabel. The **Spacing** controls the spacing between the shapes. The **Block Library** points to a temporary file that the application creates when in use.

The select blocks and block library options are seldom used to select other than the default selections listed above. If any changes are required it is if the block library is pointing to a previous software version just change the FDOT201X.C3D to the proper number

User Preferences

Post Label Preferences

Options – When **Pay Item** and **Station** are active the information will be included in the label. The **Layer** control lets you pick the correct layer that already resides in the file. The **Spacing** controls the spacing between the label shapes. The **Block Library** points to a temporary file that the application creates when in use.

The select blocks and block library options are seldom used to select other than the default selections listed below. If any changes are required it is if the block library is pointing to a previous software version just change the FDOT201X.C3D to the proper number

FDOT Sign Assembly Tool - User Preferences

Sign Post Label Preferences

☒ Pay Item post_test_payitem Select Block... ☐ Use Block(s)

☒ Station post_test_station Select Block...

Layer: PayItem_dp

Spacing: .1

Block Library: C:\FDOT2015.C3D\Data\Blocks\postblocks.dwg Browse...

Panel Label Prefs Post Label Prefs General Prefs

Ok Save Cancel

User Preferences

General Preferences

Highlight Assembly When Selected –

When selected the highlight feature uses the Civil 3D native highlighting feature

Apply Twist - This is active by default, but if placing objects using a relative rotation is optimal as shown a few pages back

Save and Recall Assembly Definitions –

When active it will cycle through already placed signs in a file

Zoom Factor – When selecting a sign in the already placed list it will zoom to in MODEL SPACE tab only and this is the control for the zoom factor

Import/Export Folder Locations –

This is the location where all of your saved assemblies go. The default location should be a location that can be used across your network due to the fact you are building a library of assemblies that may be used on other projects.

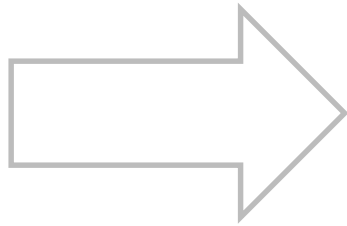
The screenshot shows the 'FDOT Sign Assembly Tool - User Preferences' dialog box with the 'Sign General Preferences' dropdown menu selected. The 'General Preferences' tab is active, showing several settings:

- ☒ Highlight Assembly when Selected
- ☒ Apply twist when placing panels and posts
- ☐ Save and Recall Assembly Definitions
- ☒ Zoom Sign Assembly when Selected
- Zoom Factor: 2
- Import/Export Folder Locations:
 - Import: C:\FDOT2015.C3D\APPS\FDOTSigns\ (with a 'Browse...' button)
 - Export: C:\FDOT2015.C3D\APPS\FDOTSigns\ (with a 'Browse...' button)
- Custom Guide Sign Library File: C:\FDOT2015.C3D\Data\Blocks\gswksp.dwg (with a 'Browse...' button)

At the bottom, there are three tabs: 'Panel Label Prefs', 'Post Label Prefs', and 'General Prefs'. The 'General Prefs' tab is selected. At the bottom right, there are three buttons: 'Ok', 'Save', and 'Cancel'.

Pavement Markings

II Pavement Markings



FDOT Pavement Marking Tool - v2.15.5.13

Pattern

Inside

☐ Enable Outside Distance Between 0.00

Outside

Justification Center

Reference Entity

☐ Draw Pattern Perpendicular to Entity

Begin Point

End Point

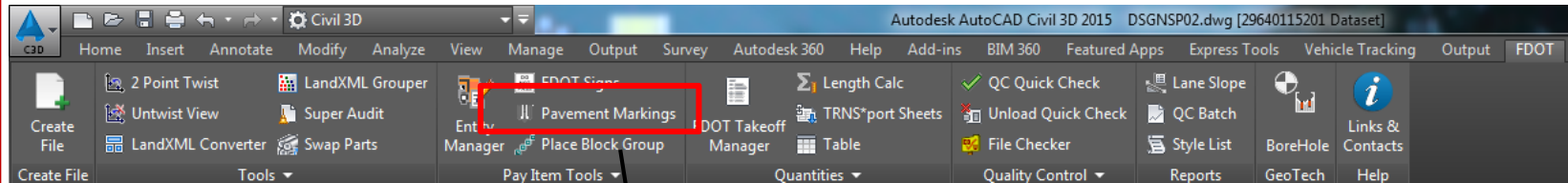
Offset 0.00

Associate Alignment (for Quantity Takeoff) None

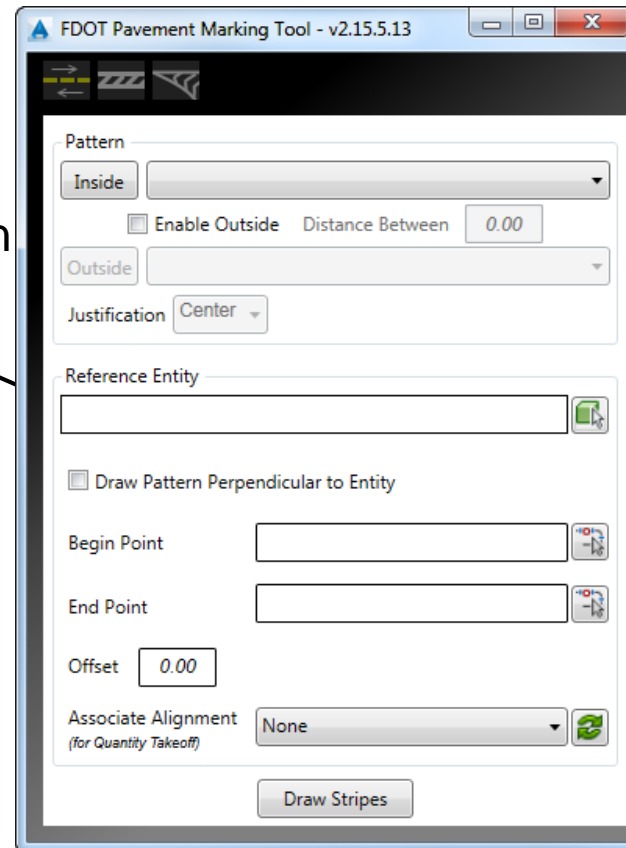
Draw Stripes

Pavement Markings

“FDOT Ribbon”



Launches the Application

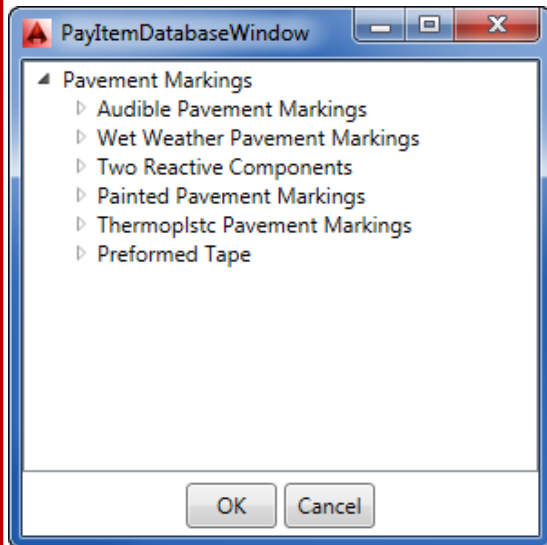


Pavement Markings

“Lane Striping” Mode

Mode Selection, Current Mode is shown in Color

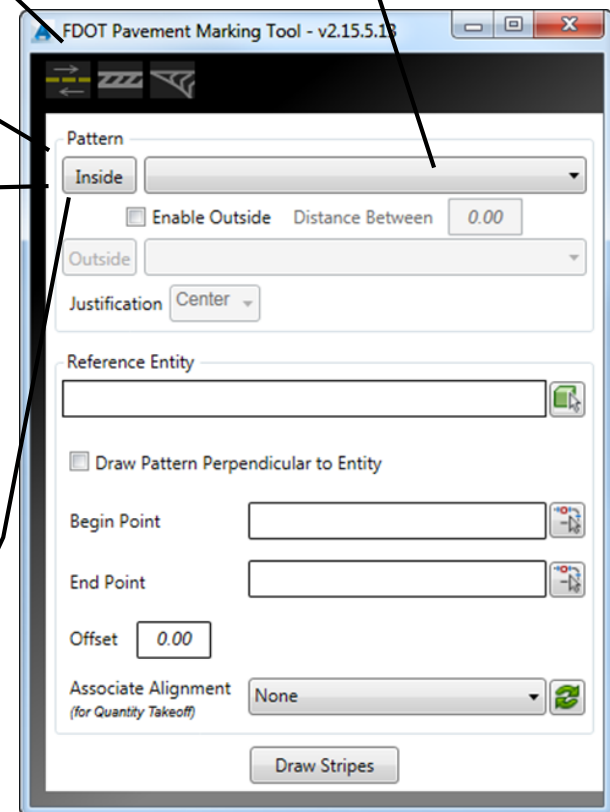
Enter the distance between the two Lane Stripes



Selecting the Inside Pattern button opens the Pay Item Database allowing you to choose your Striping pattern with Pay Item Attached

Optional Outside Striping Pattern Selection an example is if you need a double yellow line. The offset distance is to the center then the “Distance Between” is cut in half and applied on each side.

Justification – Center, Inside, Outside are the options, this allows you to control how the distance between patterns is applied.



Pavement Markings

"Lane Striping" Mode

A Reference Entity is a Alignment, Polyline, or Line or even an object from an Xref

Automatic Save to C:\p3d
Command:
Command:
Select an object:

Once you click, follow the Directions on the Command Line



FDOT Pavement Marking Tool - v2.15.5.13

Pattern

Inside

☐ Enable Outside Distance Between

Outside

Justification

Reference Entity

☐ Draw Pattern Perpendicular to Entity

Begin Point

End Point

Offset

Associate Alignment (for Quantity Takeoff)

Reference Entity

☐ Draw Pattern Perpendicular to Entity

Begin

End

Offset

The Placement Range Default is the entire Length of the object selected

Associate Alignment can be used to have patterns placed as part of a specific alignment. (see Quantities or Entity Manager handouts for more information on Alignment association)

Pavement Markings

“Lane Striping” Mode

FDOT Pavement Marking Tool - v2.15.5.13

Pattern

Inside

☐ Enable Outside Distance Between

Outside

Justification Center

Reference Entity

☐ Draw Pattern Perpendicular to Entity

Begin Point

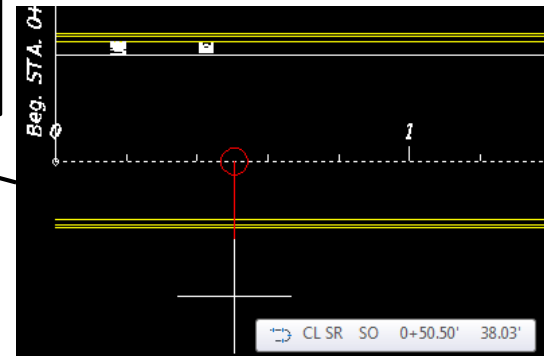
End Point

Offset

Associate Alignment (for Quantity Takeoff) None

Draw Stripes

If you want to do a station range instead of the default you can type in manually or select the pick buttons. A Red Jig will run along the Alignment so you can pick the Beginning and Ending Stations.



Starts The Place Striping Command
“Pick Side of Offset in your drawing
to Place Striping”

Tip... Once you make a entity selection it will maintain the same object until you select a different one.

Pavement Markings

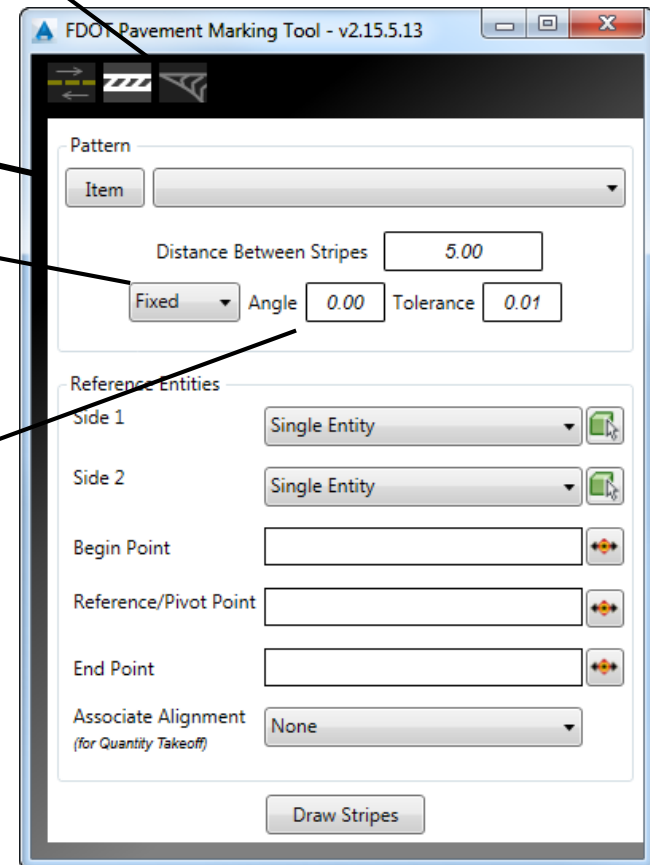
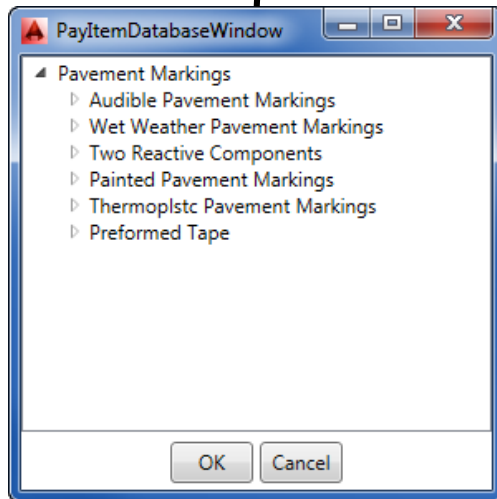
"Island Striping" Mode

Selecting the Pattern Item button opens the Pay Item Database to choose your Striping with Pay Item Attached

Mode Selector

Distance Between Stripes

Angle of Striping



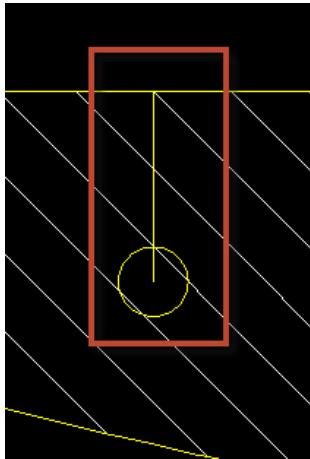
Distance Betw

Fixed
Fixed
Variable

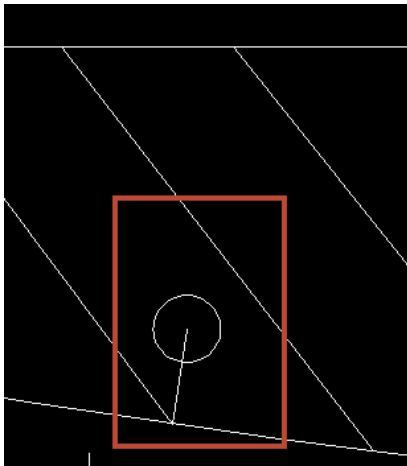
Reference Entities

Pavement Markings

"Island Striping" Mode



Reference/Pivot Point



Variable Angle Reference/Pivot

A screenshot of the FDOT Pavement Marking Tool - v2.15.5.13 interface. The interface includes a 'Pattern' section with a dropdown menu and a 'Distance Between Stripes' field set to 5.00. Below this is a 'Reference Entities' section with fields for 'Side 1', 'Side 2', 'Begin Point', 'Reference/Pivot Point', and 'End Point'. Each field has a corresponding icon to its right. At the bottom, there is an 'Associate Alignment' dropdown menu set to 'None' and a 'Draw Stripes' button. The interface is titled 'FDOT Pavement Marking Tool - v2.15.5.13' in the window title bar.

Allows you to select both sides in your drawing

Allows you to pick the Beg./Reference/End point in the Drawing

Associate Alignment can be used to have patterns placed as part of a specific alignment. (see Quantities or Entity Manager handouts for more information on Alignment association)

Draws the Stripes

Pavement Markings

"Gore Striping" Mode

Current Mode

Select Pattern with
Pay Item Attached

Chevron Selector
Diverge or Merge
Situation

(Narrow End – Wide
End) Selector

FDOT Pavement Marking Tool - v2.15.5.13

Pattern
Item

Distance Between Chevrons 5.00

Chevron Type ☒ Diverge ☐ Merge Tolerance 0.01

Reference Entities
Side 1 Single Entity
Side 2 Single Entity

Diverge/Merge Point (Narrow End of Gore)

Break Line/Gore Point (Wide End of Gore)

Associate Alignment (for Quantity Takeoff) None

Draw Chevrons

Distance
Between
Stripes

Select the Two
Sides of The Gore

Places the
Chevrons in the
Drawing

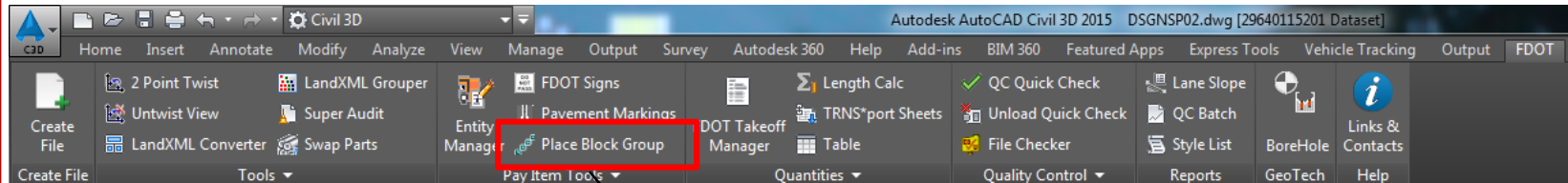


The top is one polyline (2 line segments combined into one)
The bottom line segment is one line

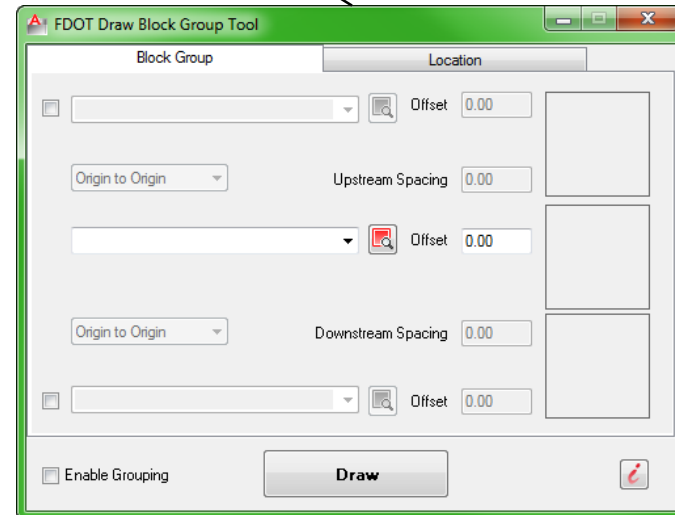
Make sure when using this mode you have single segments when you pick side 1 and 2 otherwise it won't work (see Left for example)

Place Block Group Tool

“FDOT Ribbon”



Launches the Application



Place Block Group Tool

"Block Group" Tab

FDOT Draw Block Group Tool

Block Group Location

☐ [Dropdown] [Magnifying Glass] Offset 0.00

Origin to Origin Upstream Spacing 0.00

[Dropdown] [Magnifying Glass] Offset 0.00

Origin to Origin Downstream Spacing 0.00

☐ [Dropdown] [Magnifying Glass] Offset 0.00

☐ Enable Grouping Draw

Middle Block
(Default
Active)

Groups Blocks
Together behaves
like the AutoCAD
Group Command

Places Block(s)

Block Preview
Panels

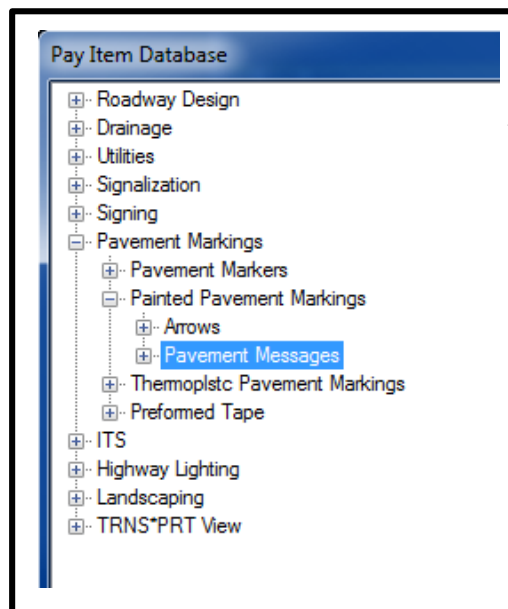
Offset Distance
From Reference
Object

Upstream and
Downstream
Spacing is
measured Both
Ways from the
center of the
Middle Block

Place Block Group Tool

“Block Group” Tab

Opens the Pay item Database for Block Selection



You can also Browse for your own defined blocks to use with this tool

Cancel

Browse for Blocks

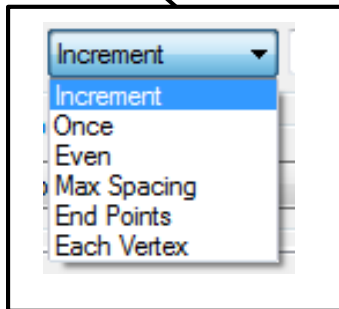
Click Boxes to Activate and build a Multiple Pavement Message

A screenshot of the 'FDOT Draw Block Group Tool' window. It has a green title bar and a light gray background. The window is divided into two main sections: 'Block Group' and 'Location'. The 'Block Group' section has three rows, each with a dropdown menu, a search icon, and an 'Offset' field set to '0.00'. The 'Location' section has three rows, each with a search icon, an 'Offset' field set to '0.00', and a large empty box. At the bottom, there is a checkbox for 'Enable Grouping', a 'Draw' button, and an information icon. A red box highlights the search icon in the middle row of the 'Block Group' section.

Place Block Group Tool

"Location" Tab

Spacing Distance is Measured from
Center of Each Block

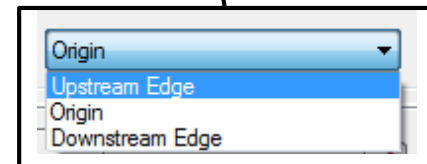


Block
Justification

A screenshot of the 'FDOT Place Block Group Tool' window, specifically the 'Location' tab. The window has two tabs: 'Block Group' and 'Location'. The 'Location' tab is active. It contains several sections: 'Entity Used for Block Placement' with a text field and a file icon; 'Block Placement Range' with 'Begin' and 'End' text fields and 'Buffer Distance' set to '0.00'; 'Spacing and Angle' with 'Spacing' set to 'Increment' and '0.00', and 'Angle' set to 'Relative' and '0.00'; 'Justification' with 'Center Block' and 'Origin' dropdowns; and a 'Place' button. There is also an 'Enable Grouping' checkbox. A line points from the 'Block Justification' text box to the 'Center Block' dropdown. Another line points from the 'Place' button to the 'Starts The Command to Place Objects' text box. A third line points from the 'Origin' dropdown to its expanded menu.

Tip... Once you make a entity
selection it will maintain the
same object until you select a
different one.

Starts The Command to Place
Objects.



Place Block Group Tool

"Location" Tab

The screenshot shows the 'FDOT Place Block Group Tool' dialog box with the 'Location' tab selected. The 'Entity Used for Block Placement' field is empty. The 'Block Placement Range' section is highlighted with a black box and contains two rows: 'Begin' and 'End', each with a text input field and a 'Buffer Distance' of '0.00'. The 'Spacing and Angle' section has 'Spacing' set to 'Increment' with a value of '0.00' and 'Angle' set to 'Relative' with a value of '0.00'. The 'Justification' section has 'Center Block' and 'Origin' dropdown menus. At the bottom, there is an 'Enable Grouping' checkbox and a 'Place' button.

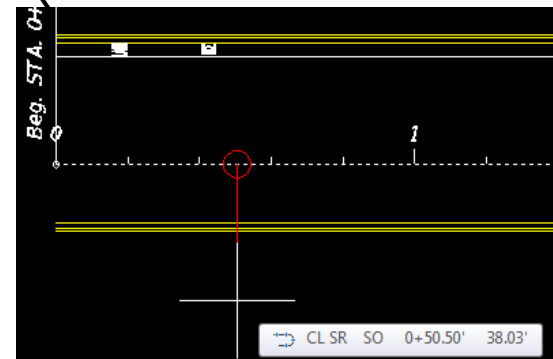
Clicking allows user to pick objects; Alignments, Lines, or Polylines and even objects from loaded Xref's.

Command

```
Automatic save to C:\030  
Command:  
Command:  
> Select an object:
```



Picking an Object in your Open Drawing



Block Placement Range - Once you have picked your object the Default is the entire Length. You can also type or select a station range. A red jig will guide you in your drawing.

Place Block Group Tool

"Location" Tab

FDOT Place Block Group Tool

Block Group | **Location**

Entity Used for Block Placement

Block Placement Range

Begin Buffer Distance

End Buffer Distance

Spacing and Angle

Spacing

Angle

Justification

Center Block Origin

☐ Enable Grouping

Place

Allows user to Pick Angle Placement of Block

